

REMARKS

Prior to this Amendment and Response, claims 29-41 were pending in the Application. Herein, Applicants ask that claim 41 be cancelled, claims 42-50 be added, and that claims 33 and 40 be amended; therefore, upon entry of the Amendment, claims 29-40 and 42-50 will remain pending in the Application. Entry of the Amendment of and allowance of the pending claims is respectfully requested.

Claim Rejections – 35 USC §112

In paragraphs 3 and 4 of the Office Action, the Examiner rejected claims 29-41 under 35 U.S.C. § 112, first paragraph, stating that the limitation in claim 40 that the predetermined exposure time is “a function of the spacing between the individual lines of the plurality of lines” did not appear to be supported by the original disclosure. In response, Applicants’ have removed this limitation from claim 40. Applicants therefore respectfully suggest that this ground for rejection has been overcome.

Claim Amendments

Applicants note that the amendments previously made, in the Response dated 30 September 2004, were in essence to rewrite claim 28 in independent form. Claim 28 was indicated to contain allowable subject matter. In that Response, Applicants also either canceled or adjusted the dependencies of the remaining claims.

As mentioned above, claim 40 has been amended to remove the requirement that the exposure time is a function of the spacing between the individual lines of the plurality of lines. Note that even as amended, however, the invention recited in claim

40 still includes the limitation of forming a plurality of lines, a feature not described by or suggested in *Goshorn et al.* (a reference previously cited by the Examiner). Rather, *Goshorn et al.* teaches the use of a single “relatively wide” beam of light for inspection (*see, for example*, col. 2, lines 27-31). There are in *Goshorn et al.*, two projectors 21 and 22, but these are strobed alternately. That is, no plurality of lines is ever created (*see* col. 17, lines 7-15), nor would it appear to be helpful (in the *Goshorn et al.* system) to turn both projectors on at once.

Moreover, *Goshorn et al.* teaches that, even though the platform 50 moves with respect to the cameras 23-30, it does not move while the images are being captured (“The above-mentioned sequence is repeated except, instead of projector 20 being pulsed, projector 22 is pulsed.” *Goshorn et al.* col. 7, lines 14-16). The recited limitation of “capturing an image of the lines *as they move*” (emphasis added for these Remarks) indicates that the camera of the present invention captures an image while moving with respect to the surface being inspected (*see, for example*, the Specification at p. 9, lines 1-8). In applications such as inspecting semiconductor wafers populated with solder balls, the method of the present invention decreases inspection time over the methods of the prior art (any may require fewer exposures).

Claim 40 has also been amended to clarify that in the claimed invention, each of the plurality of lines is created on the surface simultaneously, highlighting the distinction between the present invention and the cited reference.

Independent claim 42 has been added, and is similar (though not identical) to former claim 17, which was cancelled previously to leave only allowed claims

pending in the Application. It is believed to be distinguishable from the cited prior art for the same reasons given above in reference to claim 40.

Independent claim 47 has also been added. It is similar to claim 40 but recites the use of only a single line (or, rather, "at least one"). It remains distinguishable from *Goshorn et al.*, however, as it clearly recites that the image is to be captures while the line is moving relative to the surface being inspected. This limitation is not taught or suggested by *Goshorn et al.* Moreover, it would appear to be not useable in connection with the system that is described there.

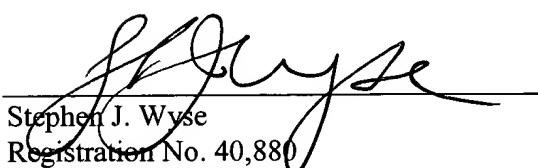
In light of the foregoing, independent claims 40, 42, and 47, particularly as now amended, and the claims dependent directly or indirectly therefrom, are believed to be in condition for allowance. Accordingly, examination and allowance of pending claims 29-40 and 42-50 is respectfully requested.

ATTORNEY DOCKET No. 1620.109
U.S. SERIAL No. 09/444,034
Response dated 13 April 2005

Respectfully submitted,

Scheef & Stone, L.L.P.

Date: 13 April 2005


Stephen J. Wyse
Registration No. 40,880
Attorney for Applicants

5956 Sherry Lane, Suite 1400
Dallas, Texas 75225
Telephone: (214) 706-4200
Facsimile: (214) 706-4242
E-mail: stephen.wyse@scheefandstone.com